

as immunoprecipitation, Western blot analysis (immunoblotting), Enzyme-linked immunosorbent assay (ELISA) or fluorescence-activated cell sorting (FACS). Antibodies directed to a protein encoded by a target nucleic acid can be identified and obtained from a variety of sources, such as the MSRS catalog of antibodies, (Aerie Corporation, Birmingham, MI or via the world wide web of the internet at ANTIBODIES-PROBES.com/), or can be prepared via conventional antibody generation methods. Methods for preparation of polyclonal, monospecific ("anti-peptide") and monoclonal antisera are taught by, for example, Ausubel *et al.* (*Short Protocols in Molecular Biology*, 2nd Ed., pp. 11-3 to 11-54, Greene Publishing Associates and John Wiley & Sons, New York, 1992).--

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**In the Claims:**

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Please cancel claims 1-54 without prejudice to their presentation in another application.

Please add new claims 55-103 as follows.

SUB  
BI }  
55. (New Claim) A method of defining a set of compounds that modulate the expression of a target nucleic acid sequence via binding of said compounds with said target nucleic acid sequence comprising:

Q2  
generating *in silico* virtual compounds according to defined criteria, wherein said virtual compounds modulate the expression of said target nucleic acid sequence;  
synthesizing compounds corresponding to at least some of said virtual compounds; and  
robotically assaying said synthetic compounds for one or more desired physical, chemical or biological properties by computer-controlled real-time polymerase chain reaction or by computer-controlled enzyme-linked immunosorbent assay.

56. (New claim) A method of defining a set of compounds that modulate the expression of a target nucleic acid sequence via binding of said compounds with said target nucleic acid sequence comprising:

evaluating *in silico* a plurality of virtual compounds according to defined criteria; and